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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,330	02/26/2004	Sung-Ki Jung	1190860-991460	9372
32605 7590 03/30/2007 MACPHERSON KWOK CHEN & HEID LLP 2033 GATEWAY PLACE SUITE 400 SAN JOSE, CA 95110			EXAMINER TADESSE, YEWEBDAR T	
			ART UNIT 1734	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/30/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/789,330

Applicant(s)

JUNG ET AL.

Examiner

Yewebdar T. Tadesse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention Claim 8 recites the limitation "the connection face" in the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination the limitation of claim 7 "wherein the slit nozzle of the spin coater includes a first inclined face, a second inclined face and a connection face..." is inserted on line 15, in claim 8, before the word "wherein".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Akimoto (US 5,772,764).

As to claim 1, Akimoto discloses (see Fig 7, column 4, lines 39-45) a cleaning unit (nozzle 24) for cleaning a slit coater (see nozzles 23a-23d) for coating a substrate with a material, the cleaning unit comprising: a body including an upper face, the upper

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face having a receiving recession (see Fig 7) for receiving a slit nozzle of the coater, the receiving recession having a sidewall and a bottom face (see Fig 7), the sidewall having a first injection hole (passage 38), a cleaning material being sprayed via the first injection hole; and a cleaning member (space 48 with lid 36) capable of eliminating dregs of material attached on the slit nozzle of the slit coater, wherein the cleaning member (lid 36) covering the bottom face of the receiving recession.

With respect to claim 4, in Akimoto the cleaning member (lid 36) is considered to be detachably attached on the bottom surface of the space (48).

As to claim 9, in Akimoto the material is photoresist (see column 2, lines 61-65).

5. Claims 1, 4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasebe et al (US 5,374,312).

As to claim 1, Hasebe et al discloses (see Figs 10-11) a cleaning unit (cleaning mechanism 80) for cleaning a slit coater (see nozzle 40, Fig 6) for coating a substrate with a material, the cleaning unit comprising: a body including an upper face, the upper face having a receiving recession (cleaning section 81, see Figs 10-11) for receiving a slit nozzle of the coater, the receiving recession having a sidewall and a bottom face (see Fig 11), the sidewall having a first injection hole (forced gas or liquid from item 82), a cleaning material being sprayed via the first injection hole; and a cleaning member (cleaning section 81 connected to discharge mechanism 83) capable of eliminating dregs of material attached on the slit nozzle of the slit coater, wherein the cleaning

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member (bottom section of the cleaning section 81) covering the bottom face of the receiving recession (cleaning section 81).

With respect to claim 4, in Hasebe et al the cleaning member (discharge mechanism 83) is considered to be detachably attached on the bottom surface of the cleaning section 81 (see Figs 10-11).

As to claim 9, in Hasebe et al the material is photoresist (see column 8, line 49).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasebe et al (US 5,374,312) in view of Park et.al (US 6,019,843).

Hasebe et al lacks teaching a cleaning member comprising rubber material or polytetrafluoroethylene. However, the use of cleaning member having a container made of rubber is well known in the art; for instance Park et al discloses such feature (see column 2, line 67-column 3, line 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include cleaning member comprising rubber material in Hasebe et al to prevent corrosion.

9. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasebe et al (US 5,374,312) or Akimoto (US 5,772,764) in view of Sakai et al (US 6,210,481).

Hasebe et al discloses a cleaning mechanism including a hole forcibly circulating gas and water. However, a sidewall having a second injection hole for spraying gas is not taught in Hasebe et al or Akimoto. Yet, Sakai et al discloses a sidewall including first and second injection holes so as to dry the nozzle after spraying the cleaning material (see column 6, lines 5-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a second injection hole in Hasebe et al or Akimoto to completely clean the nozzle without leaving traces of treatment liquid.

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Regarding claim 7, in Hasebe et al the cleaning unit as shown on Fig 6 includes inclined faces and connection face as claimed and the slit coater inserted into the cleaning mechanism.

Allowable Subject Matter

10. Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: see reasons for allowance described on the Non-final action sent on 10/12/2006. Additionally, in Hasebe et al the slit nozzle (40, see Fig 6) includes inclined faces and connection face, however it is unclear whether the bottom portion of the cleaning member makes contact with the connection face.

Response to Arguments

12. Applicant's arguments with respect to claims 1-7 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T. Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to be 'D. Paul' followed by a stylized flourish.

YTT